

Appln. No. 10/730,785
Amendment After Final Rejection filed February 22, 2006
Response to Office Action mailed November 22, 2005

REMARKS

Claims 1-19 are pending in this application. Claims 12-18 have been allowed. Claims 3-9 have been objected to only as being ultimately dependent upon rejected claim 1, and the Examiner said claims 3-9 would be allowable if suitably rewritten in independent form. Claims 1, 2, 10, 11 and 19 have been rejected. Claims 1, 12 and 13 are independent.

By this Amendment After Final Rejection Applicants seek to revise claims 1, 2 and 4-6. Upon entry of this Amendment After Final Rejection claims 1, 4-6, 12 (allowed) and 13 (allowed) will be independent.

The Examiner is thanked for the allowance of claims 12-18 and the indication of allowable subject matter in claims 3-9. Claims 12-18 have been maintained unchanged. As the Examiner helpfully suggested, claims 4-6 have been placed into independent form. Claims 7-9 all ultimately depend from claim 6, and so it was not necessary to revise those claims. Claim 3 has been maintained unchanged because claim 3 depends from claim 1 and, as explained below, claim 1 patentably distinguishes over the applied art.

Support for the changes to claims 1 and 2 can be found throughout the application as filed, for example, in Figs. 4-7 and 9, and portions of the detailed description discussing those drawings.

The Rejections Under 35 U.S.C. § 102

Claims 1 and 2 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,648,460 to Gonzales. Applicants respectfully traverse this rejection as not being well-taken, and submit the following arguments in support thereof.

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Revised claim 1 describes a liquid cartridge for supplying liquid to a liquid ejecting apparatus through a liquid supplying needle thereof when mounted on the liquid ejecting apparatus. The cartridge has a liquid accommodating section for containing liquid, a liquid supplying part, which communicates with the liquid accommodating section, the liquid supplying part including an opening into which the liquid supplying needle of the liquid ejecting apparatus is inserted, an atmospheric valve for sealing a communicating hole which allows the liquid accommodating section to communicate with the atmosphere, the atmospheric valve moving substantially in a direction parallel to a direction in which the liquid supplying needle is inserted into the opening of the liquid supplying part when the liquid cartridge is mounted on the liquid ejecting apparatus, in association with a part of the liquid ejecting apparatus, and an elastic member that urges the atmospheric valve toward the communicating hole to seal the communicating hole. There also is an atmospheric valve accommodating section for accommodating the atmospheric valve and elastic member therein, the atmospheric valve communicating with the liquid accommodating section via a passage.

Applicants submit that the claimed invention patentably distinguishes over Gonzales because, at the least, Gonzales does not even suggest either the elastic member for urging the atmospheric valve toward the communicating hole to seal the communicating hole or the atmospheric valve accommodating section that accommodates the atmospheric valve and elastic member, the atmospheric valve communicating with the liquid accommodating section by a passage.

More particularly, although Gonzales teaches a vented reservoir, Gonzales' ink container vessel 104 does not include an atmospheric accommodating section which

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accommodates both an elastic member and atmospheric valve. This can be seen in Figs. 2 and 3, which show a compression spring 214 that is **partially** received in a chamber 220, the rest of the compression spring 214 being exposed within the interior of the container vessel 104. One skilled in the art will appreciate that due to Gonzales' construction, compression spring 214 will be exposed to ink contained in the container vessel 104 - in view of the discussion at col. 4, line 64, through col. 5, line 2, stating that the vent hole 206 is closed when the vessel 104 is transported, and the discussion at col. 6, line 64, through col. 7, line 7, stating that the container vessel 104 is of the "free ink" type, one skilled in the art will understand that transportation of such a container causes the ink to slosh about, causing the ink to coat spring 214.

One skilled in the art also will recognize that, in contrast to Gonzales, in the claimed invention corrosion or other degradation of the elastic member can be prevented because of the structure of the atmospheric valve accommodating section.

It is well accepted that a reference which does not identically disclose all the features of a claimed invention cannot anticipate that invention. As just explained, Gonzales fails even to suggest at least the features of the present invention relating to the atmospheric valve accommodating section of the ink cartridge. Accordingly, Gonzales neither anticipates nor suggests this invention.

For all the foregoing reasons, favorable reconsideration and withdrawal of this rejection is respectfully requested.

Claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,666,552 to Anderson et al. Applicants respectfully traverse this rejection as not being well-taken, and submit the following arguments in support thereof.

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Claim 1 already has been discussed above in connection with the foregoing rejection. In the interests of brevity, the Examiner is respectfully directed to that discussion for a summary of Claim 1, which discussion is incorporated by reference herein.

Applicants submit that the claimed invention patentably distinguishes over Anderson because, at the least, Anderson does not even suggest that the atmospheric valve moves in association with part of the liquid ejecting apparatus.

In Anderson the check valve 16 does not engage with any part of the printing apparatus. Rather, Anderson teaches a check valve for an ink container that allows for the interior of the ink container to be evacuated; the check valve opens automatically when a sufficient pressure differential is produced across the check valve (col. 4, lines 33-52).

Since Anderson teaches a valve that opens (moves) automatically without being contacted by the printing apparatus, Anderson in no ways even suggests the above-noted feature of the present invention providing that the atmospheric valve moves in association with part of the liquid ejecting apparatus. It is well accepted that a reference which does not identically disclose all the features of a claimed invention cannot anticipate that invention. Accordingly, Anderson neither anticipates nor suggests this invention.

Again, favorable reconsideration and withdrawal of this rejection is respectfully requested.

**The Rejections Under
35 U.S.C. § 103**

Claims 10 and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gonzales in view of U.S. Patent No. 6,863,388 to Seino et al. Applicants

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respectfully traverse this rejection as not being well-taken, and submit the following arguments in support thereof.

Claims 10 and 11 both depend from and so incorporate by reference all the features of claim 1, including the features just shown to patentably distinguish over Gonzales. Claims 10 and 11 therefore patentably distinguish over Gonzales at least for the same reasons as claim 1, which reasons are incorporated by reference herein.

Seino only is suggested as teaching a seal film, tearing means and attaching part on which a memory is attached. Even assuming that Seino teaches all that the Office Action asserts, it remains that Seino does not suggest the features of the claimed invention just shown to avoid Gonzales.

In particular, Seino does not teach that a valve is part of the air flow path, much less that the valve is constructed in the manner claimed. All Seino teaches is that a film 22 is broken by a breaking tool 40 to allow airflow with the ink chamber 4. See, for example, Figs. 3, 6A and 6B. The only valves present are ink port valves 24, which prevent unwanted flow from the ink supply port (Fig. 3; col. 4, lines 6-9) and that in no way suggests the present invention.

Accordingly, claims 10 and 11 patentably distinguish over the combination of Gonzales and Seino at least for the same reasons claim 1 avoids Gonzales alone.

Claims 10 and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson in view of Seino. Applicants respectfully traverse this rejection as not being well-taken, and submit the following arguments in support thereof.

Claims 10 and 11 both depend from and so incorporate by reference all the features of claim 1, including the features just shown to patentably distinguish over Anderson.

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Claims 10 and 11 therefore patentably distinguish over Anderson at least for the same reasons as claim 1, which reasons are incorporated by reference herein.

Again, Seino already has been shown with regard to the preceding rejection under § 103(a) only to teach a seal film, tearing means and attaching part on which a memory is attached, but to lack a valve in the air flow path, and more particularly, to lack a valve as now claimed. Even assuming that Seino teaches all that the Office Action asserts, it remains that Seino does not suggest the features of the claimed invention just shown to avoid Anderson.

Accordingly, claims 10 and 11 patentably distinguish over the combination of Anderson and Seino at least for the same reasons that allow claim 1 to avoid Anderson alone. Favorable reconsideration and withdrawal of this rejection are respectfully requested.

Claim 19 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson in view of U.S. Patent No. 5,040,002 to Pollacek et al. Applicants respectfully traverse this rejection as not being well-taken, and submit the following arguments in support thereof.

Claim 19 depends from and so incorporates by reference all the features of claim 1, including the features just shown to patentably distinguish over Anderson. Claim 19 therefore patentably distinguishes over Anderson at least for the same reasons as claim 1, which reasons are incorporated by reference herein.

Pollacek is cited as teaching a check valve 38 provided between the liquid accommodation section 22 and the communicating hole 32, 42. Even assuming this is correct, it remains that Pollacek's valve differs from the claimed invention for at least the following reasons.

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By way of example only and not limitation, in this invention, as taught by the disclosure in Fig. 6 and at paragraph [0072], the check valve is different from the atmospheric valve.

Pollacek's valve 38, arguably the check valve, does not open in response to mounting of the ink cartridge on the recording apparatus; rather, as explained at col. 4, lines 23-46, Pollacek's valve remains closed until a sufficient underpressure builds in the ink tank, at which point the valve opens. There is no contact with printer structure to open Pollacek's valve. So regardless of whether Pollacek teaches a check valve it remains Pollacek does not teach an atmospheric valve, much less an atmospheric valve as claimed.

Specifically, Pollacek fails to suggest the features of claim 1 providing for an atmospheric valve that moves substantially in a direction parallel to the direction in which the liquid supply needle is inserted into the opening of the liquid supplying part when the cartridge is mounted on the liquid ejecting apparatus. Nor does Pollacek suggest the aspects of the invention involving the valve moving in association with part of the recording apparatus.

Since the cited references both suffer from the same deficiencies with regard to the invention claims, the claimed invention patentably distinguishes over the combination of those references. Accordingly, favorable reconsideration and withdrawal of this rejection are respectfully requested.

Claim 19 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gonzales in view of Pollacek. Applicants respectfully traverse this rejection as not being well-taken, and submit the following arguments in support thereof.

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Claim 19 depends from and so incorporates by reference all the features of claim 1, including the features just shown to patentably distinguish over Gonzales. Claim 19 therefore patentably distinguishes over Gonzales at least for the same reasons as claim 1, which reasons are incorporated by reference herein.

Pollacek, the other cited reference, was shown in response to the preceding rejection to be deficient and not to suggest claim 19, because Pollacek does not suggest the features of claim 1 providing for an atmospheric valve that moves substantially in a direction parallel to the direction in which the liquid supply needle is inserted into the opening of the liquid supplying part when the cartridge is mounted on the liquid ejecting apparatus, or the aspects of the invention involving the valve moving in association with part of the recording apparatus.

Nor does Pollacek teach that the ink cartridge has an atmospheric valve accommodating section for accommodating the atmospheric valve and elastic member, the atmospheric valve communicating with the liquid accommodating section via a passage. So Pollacek does not remedy the deficiencies of Gonzales.

Accordingly, claim 19 patentably distinguishes over Gonzales and Pollacek. Favorable reconsideration and withdrawal of this rejection are therefore respectfully requested.

CONCLUSION

Two of the references applied in the Office Action, U.S. 6,666,552 and U.S. 6,863,388, are commonly assigned along with the present application. To the extent this response discusses those references, such discussion involves the general teachings of those references, and should not necessarily be construed to limit the scope of the claims of those

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references or their counterparts. If any of those references is characterized as teaching a particular feature or mode of operation, the claims of that reference and its counterparts should not necessarily be construed to require that feature or mode of operation unless the feature or mode of operation is specifically recited in the claims. In this regard, it should be noted that the claims of a patent are not necessarily limited to embodiments disclosed, and that limitations in the specification are not necessarily to be imported into the claims. Also, an inventor need not foresee all uses for their invention

Applicants respectfully submit that all outstanding rejections have been addressed and are now either overcome or moot. Applicants further submit that all claims pending in this application are patentable over the prior art. Favorable reconsideration and withdrawal of those rejections and objections is respectfully requested.

In view of the foregoing revisions and remarks, Applicants respectfully request entry of this Amendment After Final Rejection and submit that entry of this Amendment will place the present application in condition for allowance. It is further submitted that entry of this Amendment can be approved by the Examiner consistent with Patent and Trademark Office practice, since the changes it makes should not require a substantial amount of additional work by the Examiner. It is believed that the changes presented in this Amendment address matters that the Examiner has previously considered.

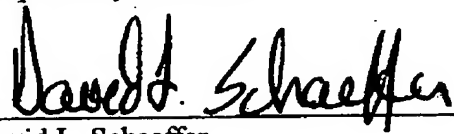
Other than the fees for additional claims which is authorized in the accompanying Fee Transmittal for FY2006 (PTO/SB/01), no fees are believed to be due in connection with the filing of this Amendment After Final Rejection. Nevertheless, should the Commissioner deem any fee(s) to be now or hereafter due, the Commissioner is authorized to charge all such fees due

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in this application, and to credit any overpayments, to the undersigned's Deposit Account No. 19-4709.

If there are any questions, or additional information is required, please contact Applicants' attorney at the number listed below.

Respectfully submitted,



David L. Schaeffer
Registration No. 32,716
Attorney for Applicants
Stroock & Stroock & Lavan LLP
180 Maiden Lane
New York, New York 10038
(212) 806-6677